



RESO[®]

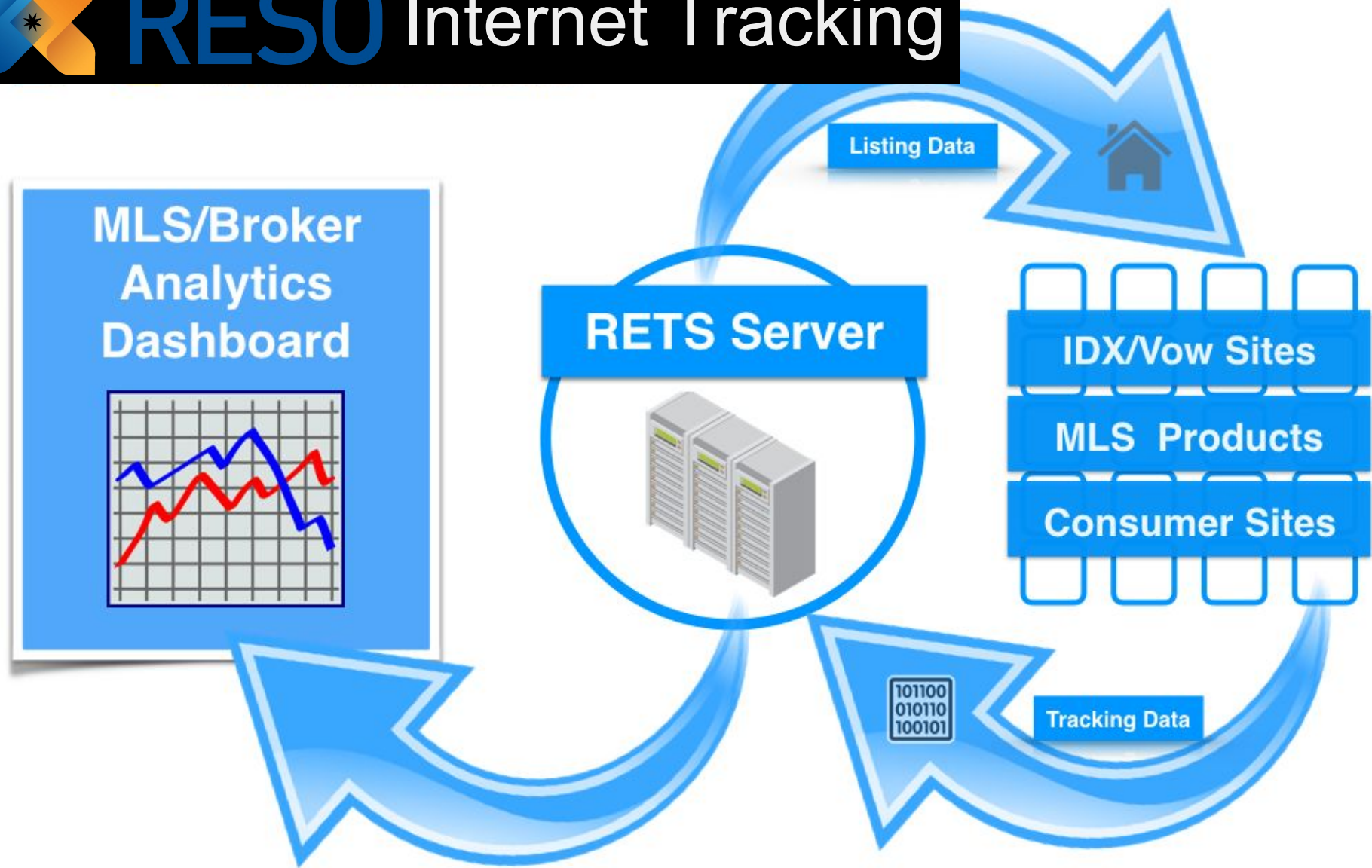
Internet Tracking

By **Chris Lambrou**, chief information officer





RESO® Internet Tracking



A person with blonde hair, wearing a dark long-sleeved shirt and shorts, is captured mid-jump on a path covered in fallen autumn leaves. The path leads into a forest with trees showing yellow and orange foliage. A wooden fence with a sign is visible in the background. The scene is bathed in warm, golden light, suggesting late afternoon or early morning.

RESO[®] Internet Tracking

49 Fields, 69 Enumerations!

Progress :)

New Objects:

- Saved Searches
- Open House
- Property
- Photo
- Document
- Virtual Tour

New Actor Fields:

- ScreenWidth
- ScreenHeight
- ColorDepth
- TimezoneOffset
- PluginList


New EventTypes:

- Exit Detailed View
- Object Modified
- Search

New Object Fields:

- ObjectCollection



- Survey Says
- Device Fingerprinting (LIVE)
- Matthew Cohen - *moving aggregate data vs. individual events with the consideration of privacy concerns*
-  - Tracking in the real world
- Mark Holt - *licensing requirements and how tracking and auditing is a requirement and that by conforming to the tracking standard participants and vendors can be reasonably assured they are in safe harbor standing with their licensors*
- If time permits... Floorplans, Multiple Results in One (1) Record - “grouping”,

RESO[®] Internet Tracking Survey



Agenda

- Identify current industry tracking practices
- Understand dedicated technical bandwidth
- Gauge time-to-implementation
- Gain direction from the community
- Are we relevant?

Survey Says?



Device Fingerprint?



A **device fingerprint** or machine **fingerprint** or browser **fingerprint** is information collected about a remote computing **device** for the purpose of identification. **Fingerprints** can be used to fully or partially identify individual users or **devices** even when cookies are turned off.

[Device fingerprint - Wikipedia](https://en.wikipedia.org/wiki/Device_fingerprint)

https://en.wikipedia.org/wiki/Device_fingerprint

Privacy?



Data anonymization is a type of information sanitization whose intent is privacy protection. It is the process of either encrypting or removing personally identifiable information from **data** sets, so that the people whom the **data** describe remain **anonymous**.

Data anonymization - Wikipedia

https://en.wikipedia.org/wiki/Data_anonymization

Transparency?



Advertising ID

Interest-based Ads **ON**

Your Advertising ID

If you opt-out of interest-based ads on this device, apps will be instructed not to use the advertising ID to build profiles for advertising purposes or target you with interest-based ads, on this device. The advertising ID is a resettable, anonymous identifier that can be used to build profiles or show you interest-based ads.

← Ads ⋮

Reset advertising ID

Opt out of Ads Personalization
Instruct apps not to use your advertising ID to build profiles or show you personalized ads. ☐

Ads by Google

Enable debug logging for ads
Instruct apps to write ads debugging information (such as network traffic) to the system log. ☐

Your advertising ID:
1aed9ff9-7e73-4138-b405-182e1e043ddf

The Want?



Site-to-Site Analytics



RESO[®] Internet Tracking

Actor.UserAgent



Actor.ScreenWidth



Actor.ScreenHeight



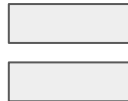
Actor.ColorDepth



Actor.TimezoneOffset



Actor.PluginList



Show Us the Demo!



Show Us Matt Cohen!

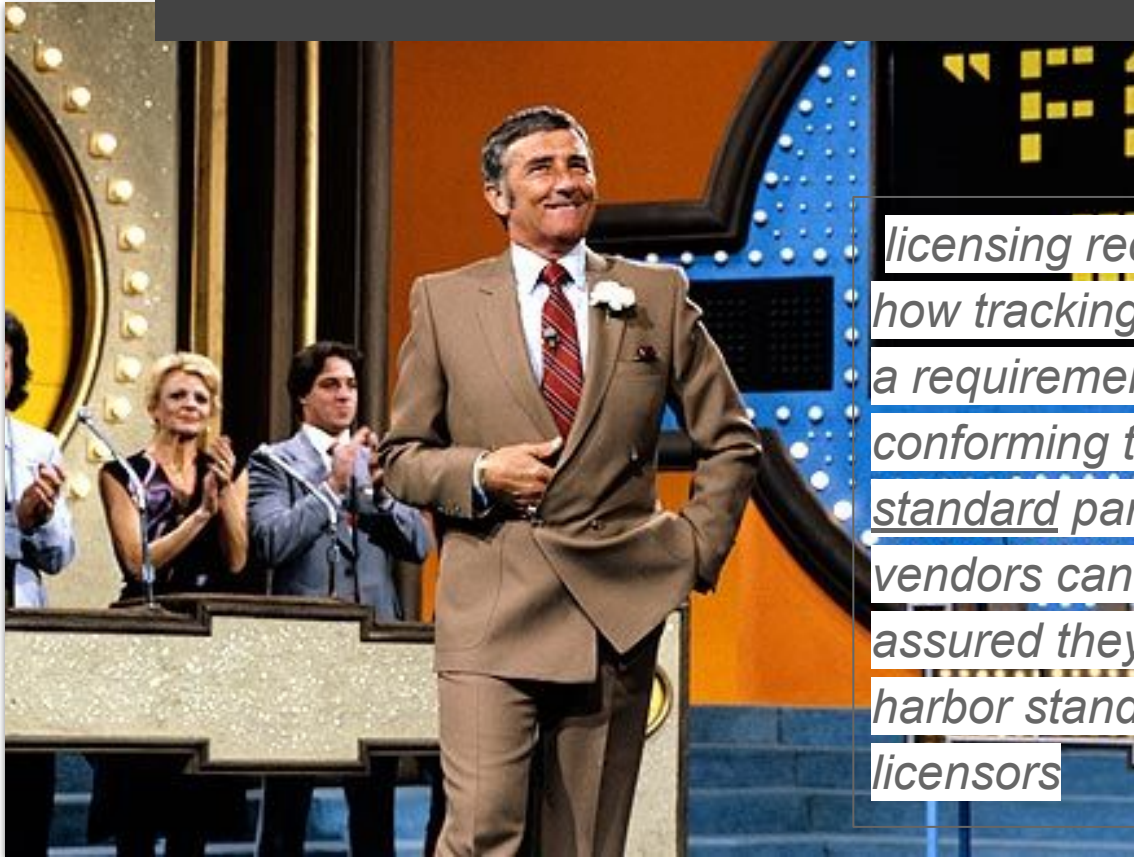


*moving aggregate data vs.
individual events with the
consideration of privacy
concerns*

Give Us the  **listtrac!**



Show Us Mark Holt!



licensing requirements and how tracking and auditing is a requirement and that by conforming to the tracking standard participants and vendors can be reasonably assured they are in safe harbor standing with their licensors

Floorplans

SECTIONS

SEARCH

NEW YORK POST

f

t

G+

e


+

TECH

Roomba maker wants to sell your home's floor plan

By Natalie O'Neill

July 25, 2017 | 1:04pm | Updated



A black Roomba vacuum cleaner is shown on a light-colored wooden floor. The vacuum is circular with a black top and a silver base. It has a small camera lens and a green light on top. The floor is made of wood planks. In the background, there is a white baseboard and a yellow wall.

Reuters

Grouping RESO[®] Internet Tracking

Listing #	Grouped #	DOM	ListPrice	SoldPrice
0U812	-	100	\$330,500	\$320,000
AC046	1,433	30	\$350,000	\$340,000
5Y692	1,233	53	\$375,000	\$350,000

```
{
  "EventType": "Search", "EventDescription": "Search for RE Listings", "EventTimestamp": "2018-02-14T17:38:38+00:00",
  "ActorType": "Consumer", "ObjectType": "Listing", "ObjectID": "",
  "ObjectCollection": [
    { "listingID": "56786" }, { "listingID": "54465" }, { "listingID": "58876" },
    { "listingID": "57789" }, { "listingID": "50598" }, { "listingID": "51512" },
    { "listingID": "52525" }, { "listingID": "56565" }, { "listingID": "54321" },
    { "listingID": "57890" }, { "listingID": "57589" }, { "listingID": "52521" }
  ]
}
```



Internet Tracking Resource



Chris Lambrou

CIO @ Metro MLS

(RESO Internet Tracking Chair)

cLambrou@metromls.com

A faint, stylized world map composed of small dots, serving as a background for the lower half of the page.

White Paper

Implementation



Thanks!

